FACT SHEET FOR NPDES PERMIT
NO. WA-002406-6

CITY OF BRIDGEPORT
P.O. BOX 640
BRIDGEPORT, WASHINGTON 98813

GENERAL INFORMATION	
Applicant:	City of Bridgeport
Facility Name and Address:	City of Bridgeport Wastewater Treatment Facility First & Fairview Bridgeport, Washington 98813
Type of Treatment:	Class 2, Oxidation Ditch Activated Sludge System
Discharge Location:	Columbia River, River Mile: 543.7 Latitude: 48° 01' 02" N Longitude: 119° 40' 55" W
Water Body ID Number:	WA-CR-1040 & NN57SG

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INTRODUCTION

The Federal Clean Water Act (FCWA, 1972, and later modifications, 1977, 1981, and 1987) established water quality goals for the navigable (surface) waters of the United States. One of the mechanisms for achieving the goals of the Clean Water Act is the National Pollutant Discharge Elimination System (NPDES) of permits, which is administered by the Environmental Protection Agency (EPA). The EPA has delegated responsibility to administer the NPDES permit program to the State of Washington (State) on the basis of Chapter 90.48 RCW which defines the Department of Ecology's (Department's) authority and obligations in administering the wastewater discharge permit program.

The regulations adopted by the State include procedures for issuing permits (Chapter 173-220 WAC), technical criteria for discharges from municipal wastewater treatment facilities (Chapter 173-221 WAC), water quality criteria for surface and ground waters (Chapters 173-201A and 200 WAC), and sediment management standards (Chapter 173-204 WAC). These regulations require that a permit be issued before discharge of wastewater to waters of the State is allowed. The regulations also establish the basis for effluent limitations and other requirements which are to be included in the proposed permit. One of the requirements (WAC 173-220-060) for issuing a permit under the NPDES permit program is the preparation of a draft permit and an accompanying fact sheet. Public notice of the availability of the draft permit is required at least thirty days before the proposed permit is issued (WAC 173-220-050). This fact sheet and draft permit are available for review (see **Appendix A--Public Involvement** of this fact sheet for more detail on the Public Notice procedures).

This fact sheet and draft permit have been reviewed by the applicant. Errors and omissions identified in this review have been corrected before going to public notice. After the public comment period has closed, the Department will summarize the substantive comments and the response to each comment. The summary and response to comments will become part of the file on the proposed permit and parties submitting comments will receive a copy of the Department's response. This fact sheet will not be revised. Comments and the resultant changes to the permit will be summarized in **Appendix D -- Response to Comments**.

BACKGROUND INFORMATION

DESCRIPTION OF THE FACILITY

History

The City of Bridgeport's (City's) Publicly-Owned Treatment Works (POTW) was originally constructed in 1968 and placed into operation in 1969. The facility was built in response to the rising water of the Columbia River due to the construction of the Wells Dam Hydroelectric Project. The facility received a major upgrade in August 1995 when a new secondary clarifier and new headworks were installed. In 1997, a phase 2 of that upgrade was completed which installed: ultraviolet (UV) disinfection, an auxiliary power generator, two new brush aerators for the oxidation ditch, and a Draimad bag sludge dewatering system.

Collection System Status

The City's collection system was originally installed in 1969 and now contains approximately 6.0 miles of piping. There have been only a few minor problems associated with inflow and infiltration (I&I) in the collection system. However, the City completed a city-wide collection system improvement project in 1988 in order to prevent future I&I problems.

Treatment Processes

The existing POTW is an activated sludge complete-mix oxidation ditch design which provides secondary treatment for the City's wastewater. The POTW is classified as a Class 2 facility due to its component parts and complexity of operations, with specific details given in **Appendix C – Wastewater Treatment Facility Classification Worksheet**. The principal treatment plant operator must be certified by the State as, at least, a Class II wastewater treatment plant operator.

Discharge Outfall

Secondary treated and disinfected effluent is discharged from the facility via an outfall line which extends into the Columbia River at River Mile 543.7. Because little was known about the type of diffuser and its present-day condition, the previous permit required an inspection to be completed. The results of that inspection indicated that the outfall diffuser, which is an open-ended pipe, lies approximately 5.0 ft. below the surface and 250 feet offshore.

Residual Solids

The treatment facilities remove solids during the treatment of the wastewater at the headworks (grit) and in the oxidation ditch (scum), in addition to incidental solids (rags and other debris) removed as part of the routine maintenance of the equipment. Grit, rags, scum and screenings

are drained and disposed of as solid waste at the local landfill. Solids removed from the secondary clarifier are treated (bag-dewatered) and land applied under a permit from the Chelan-Douglas Health District.

PERMIT STATUS

The previous permit for this facility was issued on June 24, 1994. The previous permit placed effluent limitations on 5-day Biochemical Oxygen Demand (BOD_5), Total Suspended Solids (TSS), pH, Fecal Coliform Bacteria, and Total Residual Chlorine as follows:

EFFLUENT LIMITATIONS: OUTFALL #001				
Parameter	**Units**	**Average Monthly**	**Average Weekly**	**Maximum Daily**
BOD_5	mg/L; lb./day	30; 52.5	45; 79.0	N/A
Fecal Coliform Bacteria	# colonies/100 ml	200	400	N/A
Chlorine, Total Residual	mg/L	1.00	N/A	N/A
Total Suspended Solids	mg/L; lb./day	30; 60.0	45; 90.0	N/A
Parameter	**Units**	**Daily Discharge Value**		
pH	Standard Units	Shall not be outside the range of 6.0 to 9.0.		

An application for permit renewal was submitted to the Department on August 13, 1998 and accepted on August 17, 1998.

SUMMARY OF COMPLIANCE WITH THE PREVIOUS PERMIT

The facility received its last inspection on July 29, 1998 which found the overall POTW in excellent condition with excellent effluent. The facility's UV disinfection system, the first one seen by the inspector, is compact, easy to work on and working excellently. The previous inspections have also found the wastewater treatment facilities to be in excellent condition.

During the history of the previous permit, the Permittee has remained in compliance, based on Discharge Monitoring Reports (DMRs) submitted to the Department and inspections conducted by the Department.

In fact, the facility's operation has been so good that it received, on June 16, 1998, a commendation from the Department for having an exemplary compliance record for the entire year of 1997.

WASTEWATER CHARACTERIZATION

Influent

The concentration of pollutants in the influent was reported in DMRs submitted to the Department as a requirement of the previous permit. During the 12-month period from July 1997 through June 1998, the influent is characterized and compared to approved design criteria for the existing wastewater treatment facilities as follows:

Influent Characterization and Comparison to the POTW Design Criteria

Parameter	Units	Annual Average		Maximum Monthly Average	
		Value	% of Proposed Design	Value	% of Proposed Design
BOD_5	mg/L	195.6	N/A	234.0	N/A
BOD_5	lb./day	317.1	90.6	371.0	106.0
Flow	mgd	0.199	66.3	0.214	71.3
pH	Standard Units	7.7	N/A	7.8	N/A
Temperature	ºC	16.0	N/A	21.1	N/A
TSS	mg/L	252.3	N/A	325.0	N/A
TSS	lb./day	403.3	100.8	550.0	137.5

From the above table, the Department has determined that the City has typically exceeded 85% of its design criteria for both BOD_5 and TSS. The City's permit, in Condition S4.B., required that a Plan for Maintaining Adequate Capacity (PMAC) be completed and submitted to the Department whenever 85% of any one or more design criteria have been exceeded for three or more consecutive months. The proposed permit will require a PMAC since the 85% BOD_5 design criteria was exceeded from January 1998 through May 1998, and the 85% TSS design criteria was exceeded from October 1997 through June 1998. However, the Department expects that the PMAC need only re-evaluate the present treatment facility components and re-calculate a new set of design criteria instead of actually needing to upgrade the existing plant.

Effluent

The concentration of pollutants in the effluent was reported in DMRs submitted to the Department as a requirement of the previous permit. During the 12-month period from July 1997 through June 1998, the effluent is characterized and compared to the previous permit's limits as follows:

Effluent Characterization and Comparison to the Previous Permit's Effluent Limitations

Parameter	Units	Annual Average		Maximum/Minimum	
		Value	% of Permit Limit	Value	% of Permit Limit
BOD_5	mg/L	2.7	9.0	4.0 (max.)	13.3
BOD_5	lb./day	4.3	8.2	7.0 (max.)	13.4
BOD_5, Removal	%	98.7	N/A	98.0 (min.)	N/A
Dissolved Oxygen	mg/L	5.7	N/A	4.9 (min.)	N/A
Fecal Coliform Bacteria	# colonies/100 ml	4.9	2.5	14 (max.)	7.0
pH	Standard Units	7.0	N/A	7.1 (max.)	N/A
Temperature	ºC	14.0	N/A	21.1 (max.)	N/A
TSS	mg/L	5.0	16.7	7.0 (max.)	23.3
TSS	lb./day	7.8	26.0	11.0 (max.)	36.7
TSS, Removal	%	98.1	N/A	97.0 (min.)	N/A

Upon reviewing the above data, the Department determined that the City's POTW effluent is extremely good and even consistently achieves better than 10/10 mg/l (BOD_5 and TSS).

PROPOSED PERMIT LIMITATIONS

Federal and State regulations require that effluent limitations set forth in a NPDES permit must be either technology- or water quality-based. Technology-based limitations for municipal discharges are set by regulation (40 CFR 133, and Chapters 173-220 and 173-221 WAC). Water quality-based limitations are based upon compliance with the Surface Water Quality Standards (Chapter 173-201A WAC), Ground Water Standards (Chapter 173-200 WAC), Sediment Quality Standards (Chapter 173-204 WAC) or the National Toxics Rule (Federal Register, Volume 57, No. 246, Tuesday, December 22, 1992.) The most stringent of these types of limits must be chosen for each of the parameters of concern. Each of these types of limits is described in more detail below.

The limits in the proposed permit are based in part on information received in the application. The effluent constituents in the application were evaluated on a technology- and water quality-basis. The limits necessary to meet the rules and regulations of the State were determined and included in the proposed permit. The Department does not develop effluent limits for all pollutants that may be reported on the application as present in the effluent. Some pollutants are not treatable at the concentrations reported, are not controllable at the source, are not listed in regulation, and do not have a reasonable potential to cause a water quality violation. If

significant changes occur in any constituent, as described in 40 CFR 122.42(a), the City is required to notify the Department.

DESIGN CRITERIA

In accordance with WAC 173-220-150 (1)(g), flows or waste loadings shall not exceed the latest approved design criteria. The latest design criteria for this treatment facility are taken from April 1992 Wastewater Treatment Plant Upgrade Engineering Report prepared by Forsgren Associates, P.A. and are the same as utilized in the previous permit.
The design criteria for the City of Bridgeport POTW are as follows:

Parameter	Design Quantity
Monthly average flow (max. month)	0.30 mgd
BOD_5 influent loading	350 lb./day
TSS influent loading	400 lb./day
Design population equivalent	1,830 persons

TECHNOLOGY-BASED EFFLUENT LIMITATIONS

Municipal wastewater treatment plants are a category of discharger for which technology-based effluent limits have been promulgated by federal and state regulations. These effluent limitations are given in the Code of Federal Regulations (CFR) 40 CFR Part 133 (federal) and in Chapter 173-221 WAC (State). These regulations are performance standards that constitute "all known available and reasonable methods of prevention, control, and treatment" (AKART) for municipal wastewater treatment facilities.

The following technology-based limits for pH, fecal coliform, BOD_5, and TSS are taken from Chapter 173-221 WAC are:

Technology-based Limits

Parameter	Limit
pH:	shall be within the range of 6 to 9 standard units.
Fecal Coliform Bacteria:	Monthly Geometric Mean = 200 organisms/100 mL Weekly Geometric Mean = 400 organisms/100 mL
BOD_5 (concentration):	Average Monthly Limit is the most stringent of the following: - 30 mg/L - may not exceed fifteen percent (15%) of the average influent concentration Average Weekly Limit = 45 mg/L
BOD_5 (mass):	Average Monthly Limit is calculated as the maximum monthly influent design loading (350 lbs./day) x 0.15 = 52.5 lbs./day. Average Weekly Limit is calculated as 1.5 x monthly loading = 79.0 lbs/day
TSS (concentration):	Average Monthly Limit is the most stringent of the following: - 30 mg/L - may not exceed fifteen percent (15%) of the average influent concentration Average Weekly Limit = 45 mg/L
TSS (mass):	Average Monthly Limit is calculated as the maximum monthly influent design loading (400 lbs./day) x 0.15 = 60.0 lbs./day. Average Weekly Limit is calculated as 1.5 x monthly loading = 90.0 lbs/day

SURFACE WATER QUALITY-BASED EFFLUENT LIMITATIONS

The Water Quality Standards for Surface Waters (Chapter 173-201A WAC) is a regulation designed to protect the beneficial uses of the surface waters of the State. In order to protect existing water quality and preserve the designated beneficial uses of the State's surface waters, WAC 173-201A-060 indicates that waste discharge permits shall be conditioned such that the discharge will meet established surface water quality standards. Water quality-based effluent limitations were based on an individual waste load allocation (WLA).

Numerical Criteria for the Protection of Aquatic Life

"Numerical" water quality criteria are numerical values set forth in Chapter 173-201A WAC, which specify the levels of pollutants allowed in a receiving water while remaining protective of aquatic life. These "numerical" criteria are used along with chemical and physical data for the wastewater and receiving water to derive the effluent limits in the discharge permit. When

surface water quality-based limits are more stringent or potentially more stringent than technology-based limitations, they must be used in a permit.

"Numerical" Criteria for the Protection of Human Health

The State was issued 91 "numerical" water quality criteria by the EPA designed to protect humans from cancer and other disease and are primarily applicable to fish and shellfish consumption and drinking water from surface waters.

"Narrative" Criteria

In addition to "numerical" criteria, "narrative" water quality criteria (WAC 173-201A-030) limit toxic, radioactive, or deleterious material concentrations below those which have the potential to adversely affect characteristic water uses, cause acute or chronic toxicity to biota, impair aesthetic values, or adversely affect human health. "Narrative" criteria protect the specific beneficial uses of all fresh (WAC 173-201A-130) and marine (WAC 173-201A-140) waters in the State.

Antidegradation

The State's Antidegradation Policy requires that discharges into a receiving water shall not further degrade the existing water quality of the water body. In cases where the natural conditions of a receiving water are of lower quality than the criteria assigned, the natural conditions shall constitute the water quality criteria. Similarly, when the natural conditions of a receiving water are of higher quality than the criteria assigned, the natural conditions shall constitute the water quality criteria. More information on the State Antidegradation Policy can be obtained by referring to WAC 173-201A-070.

The Department has reviewed existing records and is unable to determine if ambient water quality is either higher or lower than the designated classification criteria given in Chapter 173-201A WAC; therefore, the Department will use the designated classification criteria for this water body in the proposed permit. The discharges authorized by this proposed permit should not cause a loss of beneficial uses of the Columbia River in the vicinity of the outfall.

"Critical" Condition

Surface water quality-based limits are derived for the waterbody's "critical" condition, which represents the receiving water and waste discharge condition with the highest potential for adverse impact on the aquatic biota, human health, and existing or characteristic water body uses.

Mixing Zones

The Water Quality Standards allow the Department to authorize mixing zones around a point of discharge in establishing surface water quality-based effluent limits. Both "acute" and "chronic" mixing zones may be authorized for pollutants that can have a toxic effect on the aquatic environment near the point of discharge. The concentration of pollutants at the boundary of these mixing zones may not exceed the "numerical" criteria for that type of zone. Mixing zones can only be authorized for discharges that are complying with AKART and are in accordance with the other mixing zone requirements of WAC 173-201A-100.

The National Toxics Rule (EPA, 1992) allows additional chronic mixing zones to be used to meet human health criteria.

Description of the Receiving Water

The facility discharges to Columbia River which is designated as a Class A receiving water in the vicinity of the outfall. Characteristic uses include the following: water supply (domestic, industrial, agricultural); stock watering; fish migration; fish rearing, spawning and harvesting; wildlife habitat; primary contact recreation; sport fishing; boating and aesthetic enjoyment; commerce and navigation.

Water quality of this class shall meet or exceed the requirements for all or substantially all uses.

Surface Water Quality Criteria

Applicable criteria are defined in Chapter 173-201A WAC for aquatic biota. In addition, the EPA has promulgated human health criteria for toxic pollutants (EPA 1992). Criteria for this discharge are summarized below:

Fecal Coliforms:	100 organisms/100 mL maximum geometric mean
Dissolved Oxygen:	8 mg/L minimum
Temperature:	18 degrees Celsius maximum or incremental increases above background
pH:	6.5 to 8.5 standard units
Turbidity:	less than 5 NTUs above background
Toxics:	No toxics in toxic amounts

The receiving water (Columbia River) in the vicinity of the City's outfall is on the Department's 1998 303(d) list due to an exceedance of the State's surface water standards for total dissolved gas.

Consideration of Surface Water Quality-Based Limits for Numeric Criteria

Some pollutant concentrations in the proposed discharge may exceed water quality criteria with technology-based controls which the Department has determined to be AKART. A mixing zone is authorized in accordance with the geometric configuration, flow restriction, and other restrictions for mixing zones in Chapter 173-201A WAC and is defined as follows:

> "The length of the chronic mixing zone shall extend downstream no greater than 320 feet and upstream for no greater than 100 feet. The width of the chronic mixing zone shall not be more than 60 feet."

The dilution factors of effluent to receiving water that occur within these zones were determined at the "critical" condition by the use of the CORMIX computer model. The dilution factors were determined to be:

Parameter	Acute	Chronic
Aquatic Life	100	1000

Pollutants in an effluent may affect the aquatic environment near the point of discharge (near field) or at a considerable distance from the point of discharge (far field). Toxic pollutants, for example, are near-field pollutants--their adverse effects diminish rapidly with mixing in the receiving water. Conversely, a pollutant such as BOD is a far-field pollutant whose adverse effect occurs away from the discharge even after dilution has occurred. Thus, the method of calculating water quality-based effluent limits varies with the point at which the pollutant has its maximum effect. The derivation of water quality-based limits also takes into account the variability of the pollutant concentrations in both the effluent and the receiving water.

Due to the tremendous amount of dilution available in the mixing zone, the Department has determined that no water quality-based effluent limits are required for BOD_5, temperature, pH, fecal coliform or ammonia (the only toxic expected to be in POTW's effluent). Therefore, the technology-based effluent limitations for all of those same parameters were placed in the proposed permit. This determination assumes that the City meets the other effluent limits of the proposed permit.

The proposed permit will, however, require the City to begin monitoring the effluent for ammonia so that a database can be established of the treatment facility's efficiency.

Whole Effluent Toxicity

The Water Quality Standards for Surface Waters require that the effluent not cause toxic effects in the receiving waters. Many toxic pollutants cannot be detected by commonly available

detection methods. However, toxicity can be measured directly by exposing living organisms to the wastewater in laboratory tests and measuring the response of the organisms. Toxicity tests measure the aggregate toxicity of the whole effluent, and therefore this approach is called whole effluent toxicity (WET) testing.

Toxicity caused by unidentified pollutants is not expected in the effluent from this discharge as determined by the screening criteria given in Chapter 173-205 WAC. Therefore, no WET testing is required in the proposed permit. The Department may require effluent toxicity testing in the future if it receives information that toxicity may be present in the City's effluent.

Human Health

The State's water quality standards now include 91 "numerical" health-based criteria that must be considered in NPDES permits, which were promulgated for the State by the EPA in its National Toxics Rule (Federal Register, Volume 57, No. 246, Tuesday, December 22, 1992).

The Department has determined that the City's discharge does not contain chemicals of concern based on existing data or knowledge. The discharge will be re-evaluated for impacts to human health at the next permit reissuance.

Sediment Quality

The Department has promulgated aquatic sediment standards (Chapter 173-204 WAC) to protect aquatic biota and human health. These standards state that the Department may require Permittees to evaluate the potential for the discharge to cause a violation of applicable standards (WAC 173-204-400).

The Department has determined through a review of the discharger characteristics and effluent characteristics that this discharge has no reasonable potential to violate the State's aquatic sediment standards.

GROUND WATER QUALITY LIMITATIONS

The Department has promulgated Ground Water Quality Standards (Chapter 173-200 WAC) to protect uses of ground water. Permits issued by the Department shall be conditioned in such a manner so as not to allow violations of those standards (WAC 173-200-100). This Permittee has no discharge to ground and therefore no limitations are required based on potential effects to ground water.

COMPARISON OF EFFLUENT LIMITS WITH THE PREVIOUS PERMIT

Previous Permit's Effluent Limitations

The effluent limitations contained in the previous permit are as follows:

Effluent Limitations: #001			
Parameter	**Units**	**Average Monthly**	**Average Weekly**
BOD_5	mg/L; lb./day	30; 52.5	45; 79.0
Fecal Coliform Bacteria	# colonies/100 ml	200	400
Total Residual Chlorine	mg/L; lb./day	1.00	N/A
TSS	mg/L; lb./day	30; 60.0	45; 90.0
Parameter	**Daily Discharge Value**		
pH	Shall not be outside the range of 6.0 to 9.0.		

Proposed Permit's Effluent Limitations

The effluent limitations contained in the proposed permit for the City's discharges to the Columbia River are exactly the same as the previous permit's except with the exclusion of a total residual chlorine limit as follows:

Effluent Limitations: #001			
Parameter	**Units**	**Average Monthly**	**Average Weekly**
BOD_5	mg/L; lb./day	30; 52.5	45; 79.0
Fecal Coliform Bacteria	# colonies/100 ml	200	400
TSS	mg/L; lb./day	30; 60.0	45; 90.0
Parameter	**Daily Discharge Value**		
pH	Shall not be outside the range of 6.0 to 9.0.		

MONITORING REQUIREMENTS

Monitoring, recording, and reporting are required (WAC 173-220-210 and 40 CFR 122.41) to verify that the treatment process is functioning correctly and the effluent limitations are being achieved.

The specific monitoring schedule is detailed in the proposed permit under Condition S2. and takes into account the quantity and variability of discharge, the treatment method, past compliance, significance of pollutants, and cost of monitoring. The required monitoring frequency is consistent with agency guidance given in the current version of the Department's *Permit Writer's Manual* (July 1994) for an oxidation ditch activated sludge facility.

Additional monitoring is required in order to further characterize the effluent. These monitored parameters could have a significant impact on the quality of the surface water.

LAB ACCREDITATION

With the exception of certain parameters the permit requires all monitoring data to be prepared by a laboratory registered or accredited under the provisions of Chapter 173-50 WAC, *Accreditation of Environmental Laboratories.* The laboratory at this facility is accredited for general chemistry and microbiology.

OTHER PERMIT CONDITIONS

REPORTING AND RECORDKEEPING

The requirements of proposed permit Condition of S3. are based on the authority to specify any appropriate reporting and recordkeeping requirements to prevent and control waste discharges (WAC 273-220-210).

PREVENTION OF FACILITY OVERLOADING

Overloading of the treatment plant is a violation of the terms and conditions of the permit. As this has occurred, Condition S4. of the proposed permit based upon RCW 90.48.110 and WAC 173-220-150 will require the City to plan and complete expansions or modifications so that adequate design capacity is maintained at the treatment plant. Condition S4. also requires the City to report and correct conditions that could result in new or increased discharges of pollutants. Additionally, Condition S4. restricts the amount of flow which is permitted to enter the City's POTW.

OPERATION AND MAINTENANCE (O&M)

The proposed permit contains Condition S5. as authorized under RCW 90.48.110, WAC 173-220-150, Chapter 173-230 WAC, and WAC 173-240-080. It is included to ensure proper operation and regular maintenance of equipment, and to ensure that adequate safeguards are taken so that constructed facilities are used to their optimum potential in terms of pollutant capture and treatment. The proposed permit requires submission of an updated O&M manual, by December 31, 2000, for the entire sewage system.

RESIDUAL SOLIDS HANDLING

To prevent water quality problems the Permittee is required in Condition S7. of the proposed permit to store and handle all residual solids (grit, screenings, scum, sludge, and other solid waste) in accordance with the requirements of RCW 90.48.080 and State Water Quality Standards.

The final use and disposal of sewage sludge from the City's wastewater treatment facility is regulated by EPA under 40 CFR 503 and by the State under Chapter 173-308 WAC. The disposal of other solid waste is under the jurisdiction of the Chelan-Douglas County Health District.

PRETREATMENT

Federal and State Pretreatment Program Requirements

Under the terms of the addendum to the "Memorandum of Understanding between Washington Department of Ecology and the United States Environmental Protection Agency, Region 10" (1986), the Department has been delegated authority to administer the Pretreatment Program (i.e. act as the Approval Authority for oversight of delegated POTWs)**.**

Under this delegation of authority, the Department is responsible for issuing State Waste Discharge Permits to significant industrial users (SIUs) and other industrial users discharging to POTWs which have not been delegated authority to issue wastewater discharge permits. Industrial dischargers must obtain these permits from the Department prior to the Permittee accepting the discharge (WAC 173-216-110(5)) (Industries discharging wastewater that is similar in character to domestic wastewater are not required to obtain a permit. Such dischargers should contact the Department to determine if a permit is required.). Industrial dischargers need to apply for a State Waste Discharge Permit sixty days prior to commencing discharge. The conditions contained in the permits will include any applicable conditions for categorical discharges, loading limitations included in contracts with the POTW, and other conditions necessary to assure compliance with State water quality standards and biosolids standards.

The Department will require the City to fulfill some of the functions required for the Pretreatment Program in the proposed permit (e.g. tracking the number and general nature of industrial dischargers to its sewage system). The POTW's proposed permit will require that all SIUs currently discharging to the POTW be identified and notified of the requirement to apply for a wastewater discharge permit from the Department. None of the obligations imposed on the City by the proposed permit relieve an industrial or commercial discharger of its primary responsibility for obtaining a wastewater discharge permit (if required), including submittal of engineering reports prior to construction or modification of facilities (40 CFR 403.12(j) and WAC 173-216-070 and WAC 173-240-110, et seq.).

Wastewater Permit Required

RCW 90.48 and WAC 173-216-040 require SIUs to obtain a permit prior to discharge of industrial waste to the City's POTW. This provision prohibits the POTW from accepting industrial wastewater from any such dischargers without previous authorization from the Department.

Requirements for Routine Identification and Reporting of Industrial Users

The proposed permit will require the City to " take continuous, routine measures to identify all existing, new, and proposed SIUs and potential significant industrial users (PSIUs) discharging to its sewerage system". Examples of such routine measures include regular review of business tax licenses for existing businesses and review of water billing records and existing connection authorization records. System maintenance personnel can also be diligent during performance of their jobs in identifying and reporting as-yet unidentified industrial dischargers. Local newspapers, telephone directories, and word-of-mouth can also be important sources of information regarding new or existing discharges. The City is required to notify an industrial discharger, in writing, of its responsibilities regarding application for a State Waste Discharge Permit and to send a copy of the written notification to the Department. The Department will then take steps to solicit an application.

Duty to Enforce Discharge Prohibitions

This provision prohibits the City from authorizing or permitting an industrial discharger to discharge certain types of waste into the sanitary sewer. The first portion of the provision prohibits acceptance of pollutants which cause pass through or interference The definitions of pass through and interference are in **Appendix B -- Glossary** of this fact sheet.
The second portion of this provision prohibits the POTW from accepting certain specific types of wastes, namely those which are explosive, flammable, excessively acidic, basic, otherwise corrosive, or obstructive to the system. In addition wastes with excessive BOD, petroleum based oils, or which result in toxic gases are prohibited from discharge. The regulatory basis for these prohibitions is 40 CFR Part 403, with the exception of the pH provisions which are based on WAC 173-216-060.

The third portion of this provision prohibits certain types of discharges unless the City receives prior authorization from the Department. These discharges include cooling water in significant volumes, stormwater and other direct inflow sources, and other wastewaters significantly affecting the hydraulic loading of the POTW, but which do not require treatment.

GENERAL CONDITIONS

General Conditions are based directly on State and federal law and regulations and have been standardized for all individual municipal NPDES permits issued by the Department. Condition G1. requires responsible City officials or their designated representatives to sign submittals to the Department. Condition G2. requires the City to allow the Department to access the treatment system and records related to the proposed permit. Condition G3. specifies conditions for modifying, suspending or terminating the proposed permit. Condition G4. requires the City to apply to the Department prior to increasing or varying the discharge from the levels stated in the proposed permit's application. Condition G5. requires the City to construct, modify, and operate the permitted facility in accordance with approved engineering documents. Condition G6. prohibits the City from using the proposed permit as a basis for violating any laws, statutes or regulations. Conditions G7. relates to permit renewal. Condition G8. prohibits the reintroduction of removed substances back into the effluent. Condition G9. states that the Department will modify or revoke and reissue the proposed permit in order to conform to more stringent toxic effluent standards or prohibitions. Condition G10. incorporates by reference all other requirements of 40 CFR 122.41 and 122.42. Condition G11. notifies the City that additional monitoring requirements may be established by the Department. Condition G12 requires the payment of permit fees. Condition G13. describes the penalties for violating permit conditions.

PERMIT ISSUANCE PROCEDURES

PERMIT MODIFICATIONS

The Department may modify this permit to impose numerical limitations, if necessary to meet Water Quality Standards, Sediment Quality Standards, or Ground Water Standards, based on new information obtained from sources such as inspections, effluent monitoring, outfall studies, and effluent mixing studies.

The Department may also modify this permit as a result of new or amended state or federal regulations.

RECOMMENDATION FOR PERMIT ISSUANCE

The proposed permit meets all statutory requirements for authorizing a wastewater discharge, including those limitations and conditions believed necessary to protect human health, aquatic life, and the beneficial uses of waters of the State. The Department proposes that this permit be issued for 5 years.

REFERENCES FOR TEXT AND APPENDICES

Environmental Protection Agency (EPA)

1992. National Toxics Rule. Federal Register, V. 57, No. 246, Tuesday, December 22, 1992.

1991. Technical Support Document for Water Quality-based Toxics Control. EPA/505/2-90-001.

1988. Technical Guidance on Supplementary Stream Design Conditions for Steady State Modeling. USEPA Office of Water, Washington, D.C.

1985. Water Quality Assessment: A Screening Procedure for Toxic and Conventional Pollutants in Surface and Ground Water. EPA/600/6-85/002a.

1983. Water Quality Standards Handbook. USEPA Office of Water, Washington, D.C.

Metcalf and Eddy.

1991. Wastewater Engineering, Treatment, Disposal, and Reuse. Third Edition.

Tsivoglou, E.C., and J.R. Wallace.

1972. Characterization of Stream Reaeration Capacity. EPA-R3-72-012. (Cited in EPA 1985 op.cit.)

Washington State Department of Ecology.

1994. Permit Writer's Manual. Publication Number 92-109

Water Pollution Control Federation.

1976. Chlorination of Wastewater.

Wright, R.M., and A.J. McDonnell.

1979. In-stream Deoxygenation Rate Prediction. Journal Environmental Engineering Division, ASCE. 105(EE2). (Cited in EPA 1985 op.cit.)

APPENDIX A--PUBLIC INVOLVEMENT INFORMATION

The Department has tentatively determined to reissue a permit to the applicant listed on page 1 of this fact sheet. The proposed permit contains conditions and effluent limitations which are described in the rest of this fact sheet.

Public notice of application was published on August 6, and August 13, 1998 in the Quad City Herald to inform the public that an application had been submitted and to invite comment on the reissuance of the proposed permit.

The Department published a Public Notice of Draft (PNOD) on October 29, 1998, in the Quad City Herald to inform the public that a draft permit and fact sheet are available for review. Interested persons are invited to submit written comments regarding the draft permit. The draft permit, this fact sheet, and related documents are available for inspection and copying between the hours of 8:00 a.m. and 5:00 p.m. weekdays, by appointment, at the regional office listed below. Written comments should be mailed to:

Washington State Department of Ecology
Central Regional Office
15 West Yakima Avenue, Suite 200
Yakima, WA 98902

Any interested party may comment on the draft permit or request a public hearing within the thirty (30) day comment period to the address above. The request for a hearing shall indicate the interest of the party and the reasons why the hearing is warranted. The Department will hold a hearing if it determines there is a significant public interest in the draft permit (WAC 173-220-090). Public notice regarding any hearing will be circulated at least thirty (30) days in advance of the hearing. People expressing an interest in the proposed permit will be mailed an individual notice of hearing (WAC 173-220-100).

Comments should reference specific text followed by proposed modification or concern when possible. Comments may address technical issues, accuracy and completeness of information, the scope of the facility's proposed coverage, adequacy of environmental protection, permit conditions, or any other concern that would result from issuance of the proposed permit.
The Department will consider all comments received within thirty (30) days from the date of public notice of draft indicated above, in formulating a final determination to issue, revise, or deny the proposed permit. The Department's response to all significant comments is available upon request and will be mailed directly to people expressing an interest in the proposed permit.

Further information may be obtained from the Department by telephone, (509) 575-2490, or by writing to the address listed above.

The proposed permit and this fact sheet were written by Gregory Bohn.

APPENDIX B--GLOSSARY

Acute Toxicity -- The lethal effect of a pollutant on an organism that occurs within a short period of time, usually 48 to 96 hours.

AKART -- An acronym for "all known, available, and reasonable methods of prevention, control, and treatment".

Ambient Water Quality -- The existing environmental condition of the water in a receiving water body.

Ammonia -- Ammonia is produced by the breakdown of nitrogenous materials in wastewater. Ammonia is toxic to aquatic organisms, exerts an oxygen demand, and contributes to eutrophication. It also increases the amount of chlorine needed to disinfect wastewater.

Average Monthly Discharge Limitation -- The highest allowable average of daily discharges over a calendar month, calculated as the sum of all daily discharges measured during a calendar month divided by the number of daily discharges measured during that month (except in the case of fecal coliform). The daily discharge is calculated as the average measurement of the pollutant over the day.

Average Weekly Discharge Limitation -- The highest allowable average of daily discharges over a calendar week, calculated as the sum of all daily discharges measured during a calendar week divided by the number of daily discharges measured during that week. The daily discharge is calculated as the average measurement of the pollutant over the day.

Best Management Practices (BMPs) -- Schedules of activities, prohibitions of practices, maintenance procedures, and other physical, structural and/or managerial practices to prevent or reduce the pollution of waters of the State. BMPs include treatment systems, operating procedures, and practices to control: plant site runoff, spillage or leaks, sludge or waste disposal, or drainage from raw material storage. BMPs may be further categorized as operational, source control, erosion and sediment control, and treatment BMPs.

BOD_5 -- Determining the Biochemical Oxygen Demand of an effluent is an indirect way of measuring the quantity of organic material present in an effluent that is utilized by bacteria. The BOD_5 is used in modeling to measure the reduction of dissolved oxygen in a receiving water after effluent is discharged. Stress caused by reduced dissolved oxygen levels makes organisms less competitive and less able to sustain their species in the aquatic environment. Although BOD is not a specific compound, it is defined as a conventional pollutant under the federal Clean Water Act.

Bypass -- The intentional diversion of waste streams from any portion of a treatment facility.

Chlorine -- Chlorine is used to disinfect wastewaters of pathogens harmful to human health. It is also extremely toxic to aquatic life.

Chronic Toxicity -- The effect of a pollutant on an organism over a relatively long time, often 1/10 of an organism's lifespan or more. Chronic toxicity can measure survival, reproduction or growth rates, or other parameters to measure the toxic effects of a compound or combination of compounds.

Clean Water Act (CWA) -- The Federal Water Pollution Control Act enacted by Public Law 92-500, as amended by Public Laws 95-217, 95-576, 96-483, 97-117; USC 1251 et seq.

Combined Sewer Overflow (CSO) -- The event during which excess combined sewage flow caused by inflow is discharged from a combined sewer, rather than conveyed to the POTW because either the capacity of the POTW or the combined sewer is exceeded.

Compliance Inspection - Without Sampling -- A site visit for the purpose of determining the compliance of a facility with the terms and conditions of its permit or with applicable statutes and regulations.

Compliance Inspection - With Sampling -- A site visit to accomplish the purpose of a *Compliance Inspection - Without Sampling* and as a minimum, sampling and analysis for all parameters with limits in the permit to ascertain compliance with those limits; and, for municipal facilities, sampling of influent to ascertain compliance with the percent removal requirement. Additional sampling may be conducted.

Composite Sample -- A mixture of grab samples collected at the same sampling point at different times, formed either by continuous sampling or by mixing a minimum of four discrete samples. May be "time-composite"(collected at constant time intervals) or "flow-proportional" (collected either as a constant sample volume at time intervals proportional to stream flow, or collected by increasing the volume of each aliquot as the flow increased while maintaining a constant time interval between the aliquots.

Construction Activity -- Clearing, grading, excavation and any other activity which disturbs the surface of the land. Such activities may include road building, construction of residential houses, office buildings, or industrial buildings, and demolition activity.

Critical Condition -- The time during which the combination of receiving water and waste discharge conditions have the highest potential for causing toxicity in the receiving water environment. This situation usually occurs when the flow within a water body is low, thus, its ability to dilute effluent is reduced.

Dilution Factor -- A measure of the amount of mixing of effluent and receiving water that occurs at the boundary of the mixing zone. Expressed as the inverse of the effluent fraction e.g., a dilution factor of 10 means the effluent comprises 10% by volume and the receiving water 90%.

Engineering Report -- A document which thoroughly examines the engineering and administrative aspects of a particular domestic or industrial wastewater facility. The report shall contain the appropriate information required in WAC 173-240-060 or 173-240-130.

Fecal Coliform Bacteria -- Fecal coliform bacteria are used as indicators of pathogenic bacteria in the effluent that are harmful to humans. Pathogenic bacteria in wastewater discharges are controlled by disinfecting the wastewater. The presence of high numbers of fecal coliform bacteria in a water body can indicate the recent release of untreated wastewater and/or the presence of animal feces.

Grab Sample -- A single sample or measurement taken at a specific time or over as short period of time as is feasible.

Industrial User -- A discharger of wastewater to the sanitary sewer which is not sanitary wastewater or is not equivalent to sanitary wastewater in character.

Industrial Wastewater -- Water or liquid-carried waste from industrial or commercial processes, as distinct from domestic wastewater. These wastes may result from any process or activity of industry, manufacture, trade or business, from the development of any natural resource, or from animal operations such as feed lots, poultry houses, or dairies. The term includes contaminated storm water and, also, leachate from solid waste facilities.

Infiltration and Inflow (I/I) -- "Infiltration" means the addition of ground water into a sewer through joints, the sewer pipe material, cracks, and other defects. "Inflow" means the addition of precipitation-caused drainage from roof drains, yard drains, basement drains, street catch basins, etc., into a sewer.

Interference -- A discharge which, alone or in conjunction with a discharge or discharges from other sources, both:
Inhibits or disrupts the POTW, its treatment processes or operations, or its sludge processes, use or disposal and;

Therefore is a cause of a violation of any requirement of the POTW's NPDES permit (including an increase in the magnitude or duration of a violation) or of the prevention of sewage sludge use or disposal in compliance with the following statutory provisions and regulations or permits issued thereunder (or more stringent State or local regulations): Section 405 of the Clean Water Act, the Solid Waste Disposal Act (SWDA) (including title II, more commonly referred to as the Resource Conservation and Recovery Act (RCRA), and including State regulations contained in any State sludge management plan prepared pursuant to subtitle D of the SWDA), sludge regulations appearing in 40 CFR Part 507, the Clean Air Act, the Toxic Substances Control Act, and the Marine Protection, Research and Sanctuaries Act.

Major Facility -- A facility discharging to surface water with an EPA rating score of > 80 points based on such factors as flow volume, toxic pollutant potential, and public health impact.

Maximum Daily Discharge Limitation -- The highest allowable daily discharge of a pollutant measured during a calendar day or any 24-hour period that reasonably represents the calendar day for purposes of sampling. The daily discharge is calculated as the average measurement of the pollutant over the day.

Method Detection Level (MDL) -- The minimum concentration of a substance that can be measured and reported with 99% confidence that the analyte concentration is above zero and is determined from analysis of a sample in a given matrix containing the analyte.

Minor Facility -- A facility discharging to surface water with an EPA rating score of < 80 points based on such factors as flow volume, toxic pollutant potential, and public health impact.

Mixing Zone -- A volume that surrounds an effluent discharge within which water quality criteria may be exceeded. The area of the authorized mixing zone is specified in a facility's permit and follows procedures outlined in State regulations (Chapter 173-201A WAC).

National Pollutant Discharge Elimination System (NPDES) -- The NPDES (Section 402 of the Clean Water Act) is the Federal wastewater permitting system for discharges to navigable waters of the United States. Many states, including the State of Washington, have been delegated the authority to issue these permits. NPDES permits issued by State permit are joint NPDES/State permits issued under both State and Federal laws.

Pass through -- A discharge which exits the POTW into waters of the-State in quantities or concentrations which, alone or in conjunction with a discharge or discharges from other sources, is a cause of a violation of any requirement of the POTW's NPDES permit (including an increase in the magnitude or duration of a violation), or which is a cause of a violation of State water quality standards.

pH -- The pH of a liquid measures its acidity or alkalinity. A pH of 7 is defined as neutral, and large variations above or below this value are considered harmful to most aquatic life.

Potential Significant Industrial User (PSIU) -- A potential significant industrial user is defined as an Industrial User which does not meet the criteria for a Significant Industrial User, but which discharges wastewater meeting one or more of the following criteria:

1. Exceeds 0.5% of the POTW design criteria and discharges <25,000 gallons per day; or
2. Is a member of a group of similar industrial users which, taken together, have the potential to cause pass through or interference at the POTW (e.g. facilities which develop photographic film or paper, and car washes).

The Department may determine that a discharger initially classified as a PSIU should be managed as a significant industrial user.

Quantitation Level (QL)-- A calculated value five times the MDL (method detection level).

Significant Industrial User (SIU) -- A significant industrial user is defined as an industrial user which meets the following criteria:

1. All industrial users subject to Categorical Pretreatment Standards under 40 CFR 403.6 and 40 CFR Chapter I, Subchapter N; and
2. Any other industrial user that:
   a. Discharges an average of 25,000 gallons per day or more of process wastewater to the POTW (excluding sanitary, non-contact cooling, and boiler blow-down wastewater);
   b. Contributes a process wastestream that makes up 5% or more of the average dry weather hydraulic or organic capacity of the POTW; or
   c. Is designated as such by the Control Authority* on the basis that the industrial user has a reasonable potential for adversely affecting the POTW's operation or for violating any pretreatment standard or requirement (in accordance with 40 CFR 403.8(f)(6)).

Upon finding that the industrial user meeting the criteria in paragraph 2, above, has no reasonable potential for adversely affecting the POTW's operation or for violating any pretreatment standard or requirement, the Control Authority* may at any time, on its own initiative or in response to a petition received from an industrial user or POTW, and in accordance with 40 CFR 403.8(f)(6), determine that such industrial user is not an SIU and may rather be a PSIU.

*The term "Control Authority" refers to the Department in the case of non-delegated POTWs or to the individual POTW in the case of delegated POTWs.

State Waters -- Lakes, rivers, ponds, streams, inland waters, underground waters, salt waters, wetlands, and all other surface waters and watercourses within the jurisdiction of the State.

Stormwater -- That portion of precipitation that does not naturally percolate into the ground or evaporate, but flows via overland flow, interflow, pipes, and other features of a storm water drainage system into a defined surface water body, or a constructed infiltration facility.

Technology-based Effluent Limit -- A permit limit that is based on the ability of a treatment method to reduce the pollutant.

Total Suspended Solids (TSS) -- Total suspended solids are the particulate materials in an effluent. Large quantities of TSS discharged to a receiving water may result in solids accumulation. Apart from any toxic effects attributable to substances leached out by water, TSS may kill fish, shellfish, and other aquatic organisms by causing abrasive injuries and by clogging the gills and respiratory passages of various aquatic fauna. Indirectly, TSS can screen out light and can promote and maintain the development of noxious conditions through oxygen depletion.

Upset -- An exceptional incident in which there is unintentional and temporary noncompliance with technology-based permit effluent limitations because of factors beyond the reasonable control of the Permittee. An upset does not include noncompliance to the extent caused by operational error, improperly designed treatment facilities, lack of preventative maintenance, or careless or improper operation.

Water Quality-based Effluent Limitation -- The highest allowable concentration or mass of an effluent parameter that can be discharged to the waters of the State, which is intended to prevent the concentration of that parameter from exceeding its water quality criterion after it is discharged into the receiving water.

APPENDIX C -- WASTEWATER TREATMENT FACILITY CLASSIFICATION WORKSHEET

Purveyor: City of Bridgeport
Address: First & Fairview
Oroville, WA 98813

Facility Name: City of Bridgeport Wastewater Treatment Facility
Address: First & Fairview
Bridgeport, WA 98813

County: Douglas Phone: (509) 686-5653

Ownership of Plant: [X] Public [ ] Private

Facility --- Class	I	II	III	IV
Range of Points	25 and less	26-50	51-70	71 and greater

ITEM	POINTS	POINTS ASSIGNED
Size		
Design Flow	1 point per 5 mgd - maximum 20 points	1
Population Equivalent (PE)	1 point per 5000 PE - maximum 20 points	1
Pretreatment Units		
Manually cleaned screens	1	1
Mechanically cleaned screens	2	0
Grit removal	3	3
Pre-aeration	1	0
Communitor, barminutors, grinders, etc.	1	1
Plant pumping	3	3
Separate industrial waste pretreatment	10	0
Primary Treatment Units		
Imhoff tank, spirogesters, clarigesters, etc.	3	0
Primary clarifiers	5	0
Primary clarifiers utilizing settling aid chemicals	9	0
Secondary Treatment Units		
Trickling filter (without recirculation)	5	0
Trickling filter (with recirculation) or 2-stage RBC unit	7	0
3-stage RBC unit	9	0
Activated sludge		
Mechanical aeration	8	0
Diffused or dispersed air (or an SBR)	10	0
Oxidation ditch	8	8
Pure oxygen	13	0
Stabilization ponds	5	0
Stabilization ponds with aeration	7	0
Secondary clarifiers (or an SBR)	5	5
Tertiary Treatment Units		
Polishing pond	2	0
Land disposal of effluent, or post-aeration	5	0
Chemical treatment for phosphorus removal	5	0
Activated carbon beds (with carbon regeneration)	10	0
Activated carbon beds (without carbon regeneration)	8	0
Sand or mixed-media filters	4	0
Other nutrient removal processes following secondary treatment	10	0
Disinfection	4	4
Sludge Treatment		
Anaerobic digesters	4	0
If heated, add	3	0
If mechanically or gas mixed, add	2	0
Aerobic digesters	6	0
Drying beds or evaporation lagoons	2	0
Thickener clarifier, or polymer addition	5	0
Vacuum filter, belt press, centrifuge or other dewatering method	7	7
Land application, or supernatant lagoons	5	5
Incinerator	10	0
Utilizing digester gas for other than heating purposes	3	0
TOTAL		39
CLASS		II

APPENDIX D -- RESPONSE TO COMMENTS

No comments were received.